

REMARKS

Claims 2 is amended. Thus, by this Amendment, Claims 1 through 3, as amended, are presented for examination.

The Examiner has rejected Claims 1 through 3 as originally presented for examination as allegedly anticipated by the United States patent of Chang. It shall be apparent in view of the amendments made to the claims and the following discussion that the pending rejections are overcome.

In rejecting the claims of the application on the basis of Chang, the Examiner has explicitly drawn a correspondence between the elements of the invention as set forth in the claims and the teachings of Chang. As discussed below, the correspondences that the Examiner relies upon are not supportable.

Referring to independent Claim 1 which covers "a method for regulating the operating frequency of a fiber optic gyroscope with a closed control loop", the Examiner has made extensive correlation between the FOG main controller 14, and the functions it performs in Applicants' claimed method, and the initial frequency control generator 29 of Chang. Such a correspondence is incorrect. The initial frequency control generator 29 of

Chang supplies a single initial frequency of, typically, 75 kHz to a positive serrodyne generator 27 and to a negative serrodyne generator 28 (Chang, col. 9, lines 2 through 6). It has no other function and is therefore certainly unable in any sense to "control" the FOG in Chang and therefore provides no teaching of claim limitation "...the output signal of the main controller, as modulation signal, being fed to a digital phase modulator formed in a multifunctional integrated optical chip, and, for the purpose of determining and regulating the exact operating frequency of the FOG..." (emphasis added).

In further contrast to the invention as claimed, with reference to the operation of the initial frequency control generator 29 of Chang, the limitation "...the demodulated output signal of the FOG detector, as actual signal, is applied on the one hand to the input of an FOG main controller..." (Emphasis added) further cannot be met through the alleged correspondence of Applicants' main controller 14 with Chang's initial frequency control generator 29 as the control generator 29 receives absolutely no input. This can be seen clearly in Figures 1 and 3 of the Chang reference.

Chang further fails to teach that the demodulated output signal of a FOG detector 10 is applied to two differet

devices (i.e., the FOG main controller 14 and a VCO 12) in accordance with the limitation "...the demodulated output signal of the FOG detector, as actual signal, is applied on the one hand to the input of an FOG main controller and on the other hand, via a gating filter, to a VCO..." Rather, the demodulated output in Chang is applied solely to an integrator 26.

Finally in regard to method Claim 1, Chang fails to teach the use of a digital phase modulator. Accordingly, the claim limitation "...the output signal of the main controller, as modulation signal, being fed to a digital phase modulator..." cannot be met as alleged by the Examiner.

Independent apparatus Claim 2 has been amended to explicitly recite that the phase modulator 21 is a digital phase modulator. As stated above, Chang does not teach the use of a digital phase modulator.

Referring to dependent Claim 3, reference is made to Figure 4 of Chang which clearly fails to teach an additional electrode pair arranged between the phase modulator and a beamsplitter on an integrated optical chip. Referring to Figure 5, this is made evident by the fact that as the electrodes 52, 53 and 54 all each located equally distant from the y-junction 17',

leaving no distance therebetween in contrast to the limitation of dependent Claim 3 "...the additional electrode pair is arranged between the phase modulator and a beam splitter" (emphasis added).

For the foregoing reasons, all presently-pending claims of the application define inventions that are not anticipated by the teachings of the patent of Chang. Nor, for that matter, do the claims of the pending application define inventions that are rendered obvious by Chang either alone or in combination with any other known prior art.

As the pending claims clearly define patentable subject matter, prompt allowance and issuance of all pending claims are earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Elliott N. Kramsky", written in a cursive style.

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